

E. E. STOCKTON.
ALARM CLOCK.
APPLICATION FILED JAN. 22, 1909.

929,340.

Patented July 27, 1909.

2 SHEETS—SHEET 1.

Fig. 1

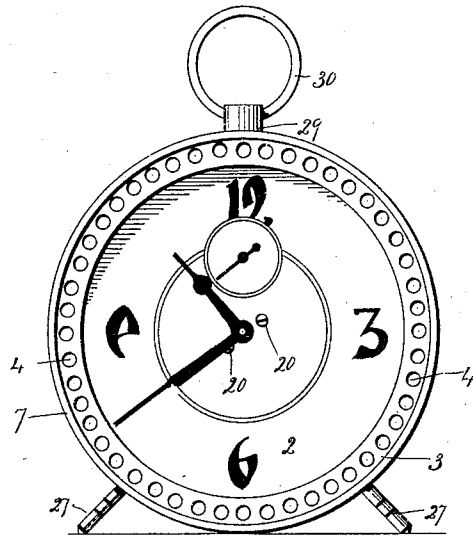
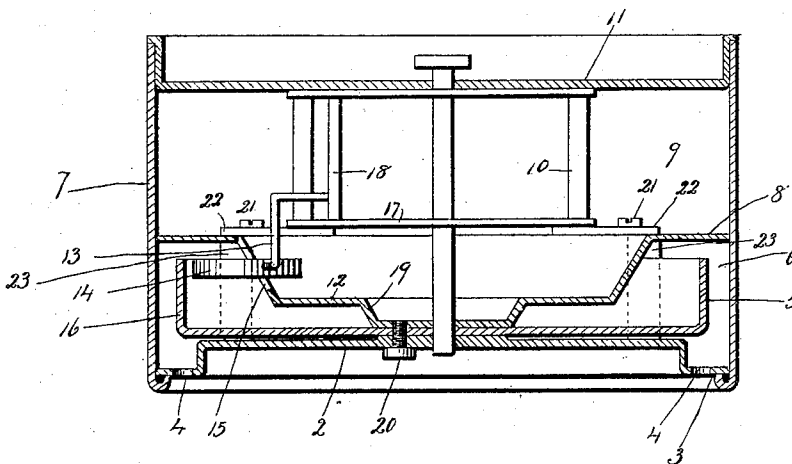


Fig. 2



Witnesses
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C. L. Reed

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by Seymour T. Carey
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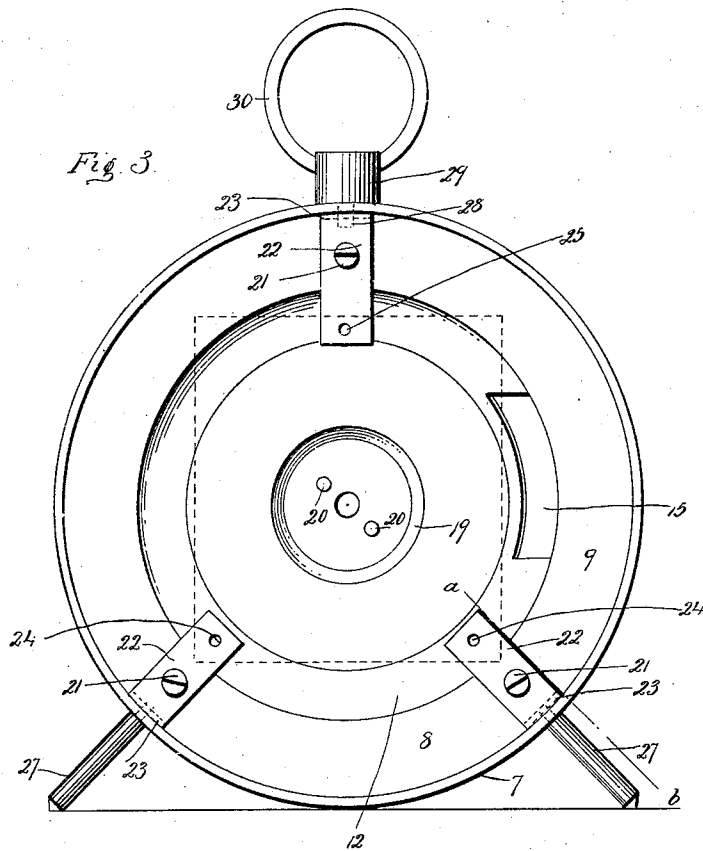
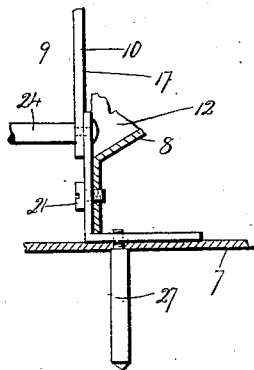


Fig. 4.



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UNITED STATES PATENT OFFICE.

ELMER E. STOCKTON, OF BRISTOL, CONNECTICUT, ASSIGNOR TO THE E. INGRAHAM COMPANY,
OF BRISTOL, CONNECTICUT, A CORPORATION.

ALARM-CLOCK.

No. 929,340.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed January 22, 1909. Serial No. 473,739.

To all whom it may concern:

Be it known that I, ELMER E. STOCKTON, a citizen of the United States, residing at Bristol, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Alarm-Clocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in front elevation of a clock showing one form which a clock constructed in accordance with my invention may assume. Fig. 2 a view thereof in horizontal section. Fig. 3 a rear view of the clock with the case back and the movement removed, the movement being indicated by broken lines. Fig. 4 a broken sectional view on the line *a-b* of Fig. 3.

My invention relates to an improvement in "nickel alarm" clocks, as clocks in small, circular, nickeled sheet-metal cases have long been designated by the trade. Such clocks as first supplied to the trade, were surmounted by a small bell supported by a post extending upward through the top of the case. Any bending of the post or bell-hammer prevented the clock from sounding the proper alarm, and the position of the bell made the clock expensive to pack for shipment. Clocks with such bells were in time largely replaced by clocks having concentrically arranged large flat bells exposed at the back. These clocks were also expensive to pack for shipment, and called for long winding and setting arbors entailing extra expense and increasing the liability to derangement. Later on the concentric bells were located entirely within a case having sound holes in its periphery as shown in Patents No. 852,859 of May 7, 1907, and No. 878,251 of February 4, 1908, granted to me conjointly with Arthur H. Porter.

My present invention relates to an improvement in nickel alarm clocks having contained bells, the object being to produce a simple, effective, reliable and convenient clock without the location of any sound holes in the periphery of the case, whereby that tendency to weaken the case is avoided. The appearance of the clock is improved and the sound-holes placed to better advantage with respect to the transmission of the

sound of the bell into the room in which the clock is located. Moreover the location of the sound-holes not in the periphery of the case, but in a vertical plane at a right angle to the periphery of the case, positions them to the very best advantage for the exclusion of dust, since dust falling by gravity will not enter them to anything like the degree it will enter holes lying in a horizontal plane, which is their position when located in the periphery of the case.

With these ends in view my invention consists in the construction and combination of parts to be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I form the dial 2 with an annular flange 3 furnished with a continuous band of sound-holes 4 for the passage through them of the sound produced by striking a concentrically arranged bell 5 located directly back of the dial the central portion of which is set inward as clearly shown by Fig. 2. The bell 5 is located within a space 6 formed in the forward portion of the circular sheet metal nickeled case 7 between the dial 2 and the dust guard 8 which consists of a circular sheet metal plate adapted in diameter to fit snugly within the case 7 so as to prevent any dust that may enter the bell-chamber or space 6 through the sound-holes 4, from working back into the space 9 occupied by the clock-movement 10 which may be of any suitable description and which is closed at the back by a cup-shaped sheet-metal case-back 11 inserted in the usual manner into the open rear end of the circular case 7. The dust-guard 8 is struck up from front to rear so as to form a deep cup 12 for the reception of a hammer arm 13 and hammer 14 which latter extends through a slot 15 in the side wall of the cup 12 so as to strike the inner face of the flange 16 of the bell. The hammer-arm 13 extends forward through the front movement-plate 17 from the verge-arbor 18 of the alarm train of the movement. The movement as aforesaid may be of any approved construction which does not need to be shown or described. The bottom of the cup 12 is struck forward to form a concentric boss 19 to which the bell 5 is secured by screws 20 which are passed from front to rear through the dial and through the bell into the boss, whereby the dial as well as the bell are supported by the dust-guard 8,

though the dial is also supported by the engagement of the edge of its flange 3 with the extreme forward edge of the case 7.

The dust-guard 8 is positioned within the case 7 and supported therein by being secured by screws 21 to the inner arms 22 of three fastening straps having their outer arms 23 bent at a right angle to their said inner arms 22 and extending rearward therefrom in engagement with the inner face of the case 7. The clock-movement is secured to the said arms 22 by the passage of its two lower pillars 24 through the same and also by a rivet 25. Screws 26 passing from front to rear through the inner arms 22 enter the rim of the dust-guard and secure the same to the arms, and hence to the movement. Legs 27 having their inner ends reduced in diameter and threaded, are passed through the case 7 and into the outer arms 23 of the lower fastening straps which are thus secured in place while a threaded stem 28 upon the pendant 29 of a suspension ring 30 passes through the top of the case at the central point therein, and into the outer arm 23 of the centrally arranged upper fastening-strap.

In the use of the clock the sound of the bell 5 passes forward through the sound-holes 4 in the dial 2 with heightened effect since the bell is located in the front of the clock, and since the sound-holes pass the sound directly forward into the room rather than laterally as when the sound-holes are located in the case proper as in the prior patents before specified. The sound-holes may, of course, vary in size and arrangement, and still fall within my invention as long as they are located in a plane transverse to the axis of the case, and therefore not in the periphery thereof. Thus they may be so formed and arranged as to represent minute marks with a three-cornered or other distinctive perforation at each five minute period, or they might take the place of the figures of the dial, and so on.

I prefer to use a concentrically arranged bell, but of course, the advantages of sound-holes located elsewhere than in the periphery of the case would be secured if the bell was located to one side of the center of the clock.

By removing the sound holes from the periphery of the case, I am enabled to make the case proper of much less expensive material than the material that must be employed if the sound holes are formed in the case, which, in that instance, must be made correspondingly heavy so that although weakened by the sound holes it will not collapse or deform. Furthermore the removal of the

sound-holes from the periphery of the case and their location in the vertical plane at the front or at the back of the case positions them to the best advantage for excluding dust from the interior of the clock as the holes are thus located parallel with the action of gravitation instead of at a right angle to it.

I claim—

1. In an alarm clock, the combination with a circular sheet-metal case, of a bell arranged within the same, and sound-holes located in the vertical plane in position to let out the sound of the bell.

2. In an alarm-clock, the combination with a circular sheet-metal case, of a dial, a bell located within the said case, and sound-holes located in, or substantially in, the plane of the dial and hence in the vertical plane.

3. In an alarm-clock, the combination with a circular sheet-metal case, of a dial having sound-holes located in the vertical plane, and a bell located within the said case and directly back of the said dial.

4. In an alarm-clock, the combination with a circular sheet-metal case, of a dial having sound-holes located in the vertical plane, a bell located within the said case at a point directly back of the dial, a clock-movement located within the case, and a dust-guard interposed between the movement and the bell.

5. In an alarm-clock, the combination with a circular sheet-metal case, of a dial having sound-holes located in the vertical plane, a bell located back of the dial, a clock-movement located within the case, a dust-guard interposed between the movement and the bell, and means for attaching the bell to the dust-guard.

6. In an alarm-clock, the combination with a circular case, of a dial located in the forward end thereof and having sound-holes located in the vertical plane, a bell located within the said case, directly back of the dial, a movement located within the case, a dust-guard interposed between the movement and the bell and struck up to form a deep cup which is slotted for the passage through it of the bell-hammer, and means for attaching the dial and bell to the central portion of the dust-guard.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ELMER E. STOCKTON.

Witnesses:

CHESTER E. INGRAHAM,
WM. P. HYND.